What is claimed is:

1. Apparatus for performing multiple procedures involving the eye, said apparatus comprising:

at least one imager for imaging at least a portion of an eye of a patient, said at least one imager configured to provide image data comprising at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data; and

a data analysis module that interrelates data from said at least two data types to provide an interpretive result.

2. Apparatus as recited in Claim 1, further comprising a display module that provides a display of analyzed data to a user.

3. Apparatus as recited in Claim 1, further comprising a display module that provides a display of analyzed data to a user using a false color representation for the displayed data.

4. Apparatus as recited in Claim 1, further comprising a data output module that reports said interrelated data from said at least two data types.

5. Apparatus as recited in Claim 1, further comprising a report module that reports said interpretive result.

6. Apparatus as recited in Claim 1, further comprising a single output module that reports said interrelated data from said at least two data types and said interpretive result.

7. Apparatus as recited in Claim 1, further comprising a superposition module for

superimposing data obtained from at least two images.

8. Apparatus as recited in Claim 7, wherein said superposition module comprises:

a module that identifies a fiduciary point in each image to be superimposed, each said fiduciary point representing substantially the same point in said eye;

a module that, as necessary, orients an image to be superimposed about said fiduciary point so that a first metric and a second metric are oriented in selected orientations;

a module that, as necessary, scales an image so that a first unit of measure associated with said first metric and a second unit of measure associated with said second metric are substantially equal to selected first and second values in each image to be superimposed; and

a module that creates a one-to-one correspondence between said fiduciary point, said first metric and said second metric in a first image to be superimposed with said fiduciary point, said first metric and said second metric in a second image to be superimposed.

9. Apparatus as recited in Claim 8, wherein said first metric is a first axial direction, said second metric is a second axial direction that is coplanar with but not parallel to said first axial direction, said first unit of measure associated with said first metric is a length along said first axial direction, and said second unit of measure associated with said second metric is a length along said second axial direction.

10. Apparatus as recited in Claim 8, wherein said first metric is a first axial direction, said second metric is an angular displacement from said first axial direction, said first unit of measure associated with said first metric is a length along said first axial direction, and said second unit of measure associated with said second metric is a unit of angular measure.

11. Apparatus as recited in Claim 7, wherein said superposition module comprises:

a module that identifies a first fiduciary point in each image to be superimposed, each said first fiduciary point representing substantially the same point in said

eye;

a module that identifies a second fiduciary point in each image to be superimposed, each said second fiduciary point representing substantially the same point in said eye;

a module that, as necessary, scales an image so that a distance between said first fiduciary point and said second fiduciary point in said image is substantially equal to a distance between said first fiduciary point and said second fiduciary point in another of said at least two images to be superimposed; and

a module that creates a one-to-one correspondence between said first and second fiduciary points of said first image and said second image of said at least two images to be superimposed.

12. Apparatus as recited in Claim 7, further comprising a display for displaying said superimposed data obtained from at least two images.

13. Apparatus as recited in Claim 12, wherein said superimposed data obtained from at least two images comprises data obtained from at least two different data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, and visible image data.

14. Apparatus as recited in Claim 1, further comprising a memory for storing image data.

15. Apparatus as recited in Claim 14, wherein said memory for storing image data is configured to store and to selectively retrieve data from at least one image for determining changes induced in response to an applied stress.

16. Apparatus as recited in Claim 15, where said applied stress is selected from the group consisting of intra ocular pressure variation, blood pressure variation, oxygen concentration variation, exercise, flashing light, drug administration, administration of insulin, and administration of glucose.

17. Apparatus as recited in Claim 15, wherein said memory is configured to store and to selectively retrieve data from at least one image for determining a time evolution of changes induced in response to an applied stress.

18. Apparatus as recited in Claim 14, wherein said memory for storing image data is configured to selectively retrieve data from at least one image for trending analysis purposes.

19. Apparatus as recited in Claim 14, wherein said memory for storing image data is configured to archivally store image data.

20. Apparatus as recited in Claim 1, further comprising means for aligning the image of the eye of a patient.

21. Apparatus as recited in Claim 20, wherein said alignment means operates automatically based on the movement of said eye of a patient relative to said imaging means.

22. Apparatus as recited in Claim 21, wherein said alignment means includes a fixation pattern for focusing a macula of said eye thereon.

23. Apparatus as recited in Claim 1, wherein said data analysis module is configured to automatically determine a presence of an abnormality.

24. Apparatus as recited in Claim 23, wherein said data analysis module is configured to automatically determine an extent of said abnormality.

25. Apparatus as recited in Claim 24, wherein said data analysis module comprises a scaling module for providing a scaled estimation of the extent of the abnormality.

26. Apparatus as recited in Claim 23 wherein said data analysis module is configured to

automatically determine a change in the extent of said abnormality over time.

27. Apparatus as recited in Claim 1, further comprising an information input module for inputting other patent-related information including at least one from the group of tonometer intraocular pressure, patient-history, family history, blood pressure, vital signs, medication and pupillometry.

28. Apparatus for performing multiple procedures involving the eye, said apparatus comprising:

a data collection apparatus for collecting a data set corresponding to at least a portion of an eye of a patient, said data collection apparatus configured to provide data indicative of at least two neurological disorders selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns; and

a data analysis module that interrelates said data indicative of at least two neurological disorders to provide a interpretive result.

29. Apparatus as recited in Claim 28, wherein said apparatus further comprises a map generation module for generating a map indicative of the presence of a selected one of glaucoma, macular degeneration, and inappropriate responses to contrast sensitivity patterns.

30. Apparatus as recited in Claim 28, wherein said apparatus further comprises a measurement module for measuring response that can be interpreted as a loss of ganglion cells associated with a selected one of Parkinson's disease, and Alzheimer's disease.

31. Apparatus as recited in Claim 28, wherein said apparatus further comprises a measurement module for generating data indicative of the presence of a selected one of dyslexia, multiple sclerosis, diabetic retinopathy, and optic neuritis.

32. Apparatus as recited in Claim 28, further comprising a data output module that reports said interrelated data from said data set.

33. Apparatus as recited in Claim 28, further comprising a report module that reports said interpretive result.

34. Apparatus as recited in Claim 28, further comprising a single output module that reports said interrelated data from said data set and said interpretive result.

35. Apparatus as recited in Claim 28, further comprising a superposition module for superimposing data obtained from at least two data sets.

36. Apparatus as recited in Claim 35, wherein said superposition module comprises:

a module that identifies a fiduciary point in each data set to be superimposed, each said fiduciary point representing substantially the same point in said eye;

a module that, as necessary, orients data to be superimposed about said fiduciary point so that a first metric and a second metric are oriented in selected orientations;

a module that, as necessary, scales a data set so that a first unit of measure associated with said first metric and a second unit of measure associated with said second metric are substantially equal to selected first and second values in each data set to be superimposed; and

a module that creates a one-to-one correspondence between said fiduciary point, said first metric and said second metric in a first data set to be superimposed with said fiduciary point, said first metric and said second metric in a second data set to be superimposed.

37. Apparatus as recited in Claim 36, wherein said first metric is a first axial direction, said second metric is a second axial direction that is coplanar with but not parallel to said first axial direction, said first unit of measure associated with said first metric is a length along said first axial direction, and said second unit of measure associated with said second

metric is a length along said second axial direction.

38. Apparatus as recited in Claim 36, wherein said first metric is a first axial direction, said second metric is an angular displacement from said first axial direction, said first unit of measure associated with said first metric is a length along said first axial direction, and said second unit of measure associated with said second metric is a unit of angular measure.

39. Apparatus as recited in Claim 35, wherein said superposition module comprises:

a module that identifies a first fiduciary point in each data set to be superimposed, each said first fiduciary point representing substantially the same point in said eye;

a module that identifies a second fiduciary point in each data set to be superimposed, each said second fiduciary point representing substantially the same point in said eye;

a module that, as necessary, scales a data set so that a distance between said first fiduciary point and said second fiduciary point in said data set is substantially equal to a distance between said first fiduciary point and said second fiduciary point in another of said at least two data sets to be superimposed; and

a module that creates a one-to-one correspondence between said first and second fiduciary points of said first data set and said second data set of said at least two data sets to be superimposed.

40. Apparatus as recited in Claim 35, further comprising a display for displaying said superimposed data obtained from at least two data sets.

41. Apparatus as recited in Claim 40, wherein said superimposed data obtained from at least two data sets comprises data indicative of at least two different neurological disorders selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns.

42. Apparatus as recited in Claim 28, further comprising a memory for storing data.

43. Apparatus as recited in Claim 42, wherein said memory for storing data is configured to store and to selectively retrieve data from at least one data set for determining changes induced in response to an applied stress.

44. Apparatus as recited in Claim 43, where said applied stress is selected from the group consisting of intra ocular pressure variation, blood pressure variation, oxygen concentration variation, exercise, flashing light, drug administration, administration of insulin, and administration of glucose.

45. Apparatus as recited in Claim 43, wherein said memory is configured to store and to selectively retrieve data from at least one data set for determining a time evolution of changes induced in response to an applied stress.

46. Apparatus as recited in Claim 42, wherein said memory for storing data is configured to selectively retrieve data from at least one data set for trending analysis purposes.

47. Apparatus as recited in Claim 42, wherein said memory for storing data is configured to archivally store data.

48. Apparatus as recited in Claim 28, further comprising means for aligning an eye of a patient.

49. Apparatus as recited in Claim 48, wherein said alignment means operates automatically based on the movement of said eye of a patient relative to said data collection means.

50. Apparatus as recited in Claim 48, wherein said alignment means includes a fixation pattern for aligning a macula of said eye thereon.

51. Apparatus as recited in Claim 28, further comprising means for performing at least one objective eye-related interpretive procedure relating to a neurological disorder.

52. Apparatus as recited in Claim 51, wherein said at least one objective eye-related interpretive procedure includes at least one of PERG, OKN and VEP.

53. Apparatus as recited in Claim 28, wherein said apparatus displays to an eye of a patient a test pattern comprising a fixation signal and a moving pattern during an OKN procedure.

54. Apparatus as recited in Claim 53, wherein said fixation signal comprises a horizontal line segment.

55. Apparatus as recited in Claim 28, wherein said data analysis module is configured to automatically determine a presence of an abnormality.

56. Apparatus as recited in Claim 55, wherein said data analysis module is configured to automatically determine an extent of said abnormality.

57. Apparatus as recited in Claim 56, wherein said data analysis module comprises a scaling module for providing a scaled estimation of the extent of the abnormality.

58. Apparatus as recited in Claim 55, wherein said data analysis module is configured to automatically determine a change in the extent of said abnormality over time.

59. Apparatus as recited in Claim 28, further comprising an information input module for inputting other patent-related information including at least one from the group of tonometer intraocular pressure, patient-history, family history, blood pressure, vital signs, medication and pupillometry.

60. Apparatus for performing multiple procedures involving the eye, said apparatus comprising:

an imager for imaging at least a portion of an eye of a patient, said imager configured to provide image data;

a data collection apparatus for collecting a data set corresponding to at least a portion of an eye of a patient, said data collection apparatus configured to provide data indicative of a neurological disorder; and

a data analysis module that interrelates said image data and said data indicative of a neurological disorder to provide a interpretive result.

61. Apparatus as recited in Claim 60, wherein said image data comprising a data type selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data.

62. Apparatus as recited in Claim 60, wherein said neurological disorder is selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns.

63. Apparatus as recited in Claim 60, further comprising a data output module that reports said interrelated data from said image data and said data indicative of a neurological disorder.

64. Apparatus as recited in Claim 60, further comprising a display module that provides a display of analyzed data to a user.

65. Apparatus as recited in Claim 60, further comprising a display module that provides a display of analyzed data to a user using a false color representation for the displayed data.

66. Apparatus as recited in Claim 60, further comprising a report module that reports

said interpretive result.

67. Apparatus as recited in Claim 60, further comprising a single output module that reports said interrelated data from said image data and said data indicative of a neurological disorder and said interpretive result.

68. Apparatus as recited in Claim 60, further comprising a superposition module for superimposing data obtained from an image and data indicative of a neurological disorder.

69. Apparatus as recited in Claim 68, wherein said superposition module comprises:

a module that identifies a fiduciary point in said image to be superimposed, and a fiduciary point in said data indicative of a neurological disorder, each said fiduciary point representing substantially the same point in said eye;

a module that, as necessary, orients at least one of said image and said data indicative of a neurological disorder to be superimposed about said fiduciary point so that a first metric and a second metric are oriented in selected orientations;

a module that, as necessary, scales at least one of said image and said data indicative of a neurological disorder so that a first unit of measure associated with said first metric and a second unit of measure associated with said second metric are substantially equal to selected first and second values in each of said image and said data indicative of a neurological disorder to be superimposed; and

a module that creates a one-to-one correspondence between said fiduciary point, said first metric and said second metric in said image to be superimposed with said fiduciary point, said first metric and said second metric in said data indicative of a neurological disorder to be superimposed.

70. Apparatus as recited in Claim 69, wherein said first metric is a first axial direction, said second metric is a second axial direction that is coplanar with but not parallel to said first axial direction, said first unit of measure associated with said first metric is a length

along said first axial direction, and said second unit of measure associated with said second metric is a length along said second axial direction.

71. Apparatus as recited in Claim 69, wherein said first metric is a first axial direction, said second metric is an angular displacement from said first axial direction, said first unit of measure associated with said first metric is a length along said first axial direction, and said second unit of measure associated with said second metric is a unit of angular measure.

72. Apparatus as recited in Claim 68, wherein said superposition module comprises:

a module that identifies a first fiduciary point in each of said image and said data indicative of a neurological disorder to be superimposed, each said first fiduciary point representing substantially the same point in said eye;

a module that identifies a second fiduciary point in each of said image and said data indicative of a neurological disorder to be superimposed, each said second fiduciary point representing substantially the same point in said eye;

a module that, as necessary, scales an image so that a distance between said first fiduciary point and said second fiduciary point in said image is substantially equal to a distance between said first fiduciary point and said second fiduciary point in said data indicative of a neurological disorder to be superimposed; and

a module that creates a one-to-one correspondence between said first and second fiduciary points of said image and said data indicative of a neurological disorder to be superimposed.

73. Apparatus as recited in Claim 68, further comprising a display for displaying said superimposed data obtained from said image and said data indicative of a neurological disorder.

74. Apparatus as recited in Claim 60, further comprising a memory for storing data, said data comprising at least one of image data and data indicative of a neurological disorder.

75. Apparatus as recited in Claim 74, wherein said memory for storing data is configured to store and to selectively retrieve data for determining changes induced in response to an applied stress.

76. Apparatus as recited in Claim 75, where said applied stress is selected from the group consisting of intra ocular pressure variation, blood pressure variation, oxygen concentration variation, exercise, flashing light, drug administration, administration of insulin, and administration of glucose.

77. Apparatus as recited in Claim 75, wherein said memory is configured to store and to selectively retrieve data for determining a time evolution of changes induced in response to an applied stress.

78. Apparatus as recited in Claim 74, wherein said memory for storing data is configured to selectively retrieve data for trending analysis purposes.

79. Apparatus as recited in Claim 74, wherein said memory for storing data is configured to archivally store data.

80. Apparatus as recited in Claim 60, further comprising means for aligning the image of the eye of a patient.

81. Apparatus as recited in Claim 80, wherein said alignment means operates automatically based on the movement of said eye of a patient relative to said imaging means.

82. Apparatus as recited in Claim 81, wherein said alignment means includes a fixation pattern for focusing a macula of said eye thereon.

83. Apparatus as recited in Claim 60, further comprising means for performing at least one objective eye-related interpretive procedure.

84. Apparatus as recited in Claim 83, wherein said at least one objective eye-related interpretive procedure includes at least one of PERG, OKN and VEP.

85. Apparatus as recited in Claim 60, wherein said apparatus displays to an eye of a patient a test pattern comprising a fixation signal and a moving pattern during an OKN procedure.

86. Apparatus as recited in Claim 85, wherein said fixation signal comprises a horizontal line segment.

87. Apparatus as recited in Claim 60, wherein said data analysis module is configured to automatically determine a presence of an abnormality.

88. Apparatus as recited in Claim 87, wherein said data analysis module is configured to automatically determine an extent of said abnormality.

89. Apparatus as recited in Claim 88, wherein said data analysis module comprises a scaling module for providing a scaled estimation of the extent of the abnormality.

90. Apparatus as recited in Claim 87 wherein said data analysis module is configured to automatically determine a change in the extent of said abnormality over time.

91. Apparatus as recited in Claim 60, further comprising an information input module for inputting other patent-related information including at least one from the group of tonometer intraocular pressure, patient-history, family history, blood pressure, vital signs, medication and pupillometry.

92. A method of treating a patient, comprising the steps of:

performing an examination of a patient using the apparatus of any of Claims 1, 28, or 60; and

treating said patient based at least in part on a result obtained from said

examination.

93. The method of treatment of Claim 92, further comprising the step of providing said treatment based at least in part on information stored in a memory.

94. A computer program recorded on a machine readable medium, said computer program comprising:

a data analysis module that interrelates at least two data types, said at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data.

95. A computer program recorded on a machine readable medium, said computer program comprising:

a data analysis module that interrelates at least two types of data indicative of a neurological disorder selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns.

96. A computer program recorded on a machine readable medium, said computer program comprising:

a data analysis module that interrelates image data and data indicative of a neurological disorder, said image data comprising a data type selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data, and said data indicative of a neurological disorder selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast

sensitivity patterns.

97. A method of diagnosis of a state of health of a patient, comprising the steps of:

imaging at least a portion of an eye of a patient to obtain image data comprising at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data; and

interrelating said data from said at least two data types to provide an interpretive result.

98. A method of diagnosis of a state of health of a patient, comprising the steps of:

imaging at least a portion of an eye of a patient to obtain image data indicative of at least two neurological disorders selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns; and

interrelating said image data indicative of said at least two neurological disorders to provide an interpretive result.

99. A method of diagnosis of a state of health of a patient, comprising the steps of:

imaging at least a portion of an eye of a patient to obtain image data comprising a data type selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence topography data, thermal image data, spectroscopic image data, refractometry data, and visible image data, and data indicative of a neurological disorder selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns; and

interrelating said image data and said data indicative of a neurological disorder to provide an interpretive result.